

CLAIMS

1. A control device for a vehicle alternator, comprising:
an alternator connected to a battery mounted in a vehicle;
a regulator including a regulator IC for adjusting the power generation voltage of the alternator; and
an ECU connected to the regulator,
wherein an average value obtained by performing an averaging process on ON time of a DF signal measured during predetermined sampling time is used as ON ratio information of the DF signal inputted from the regulator to the ECU.

2. A control device for a vehicle alternator according to claim 1, wherein the regulator IC comprises:

a power transistor for performing ON/OFF control of a field current of the alternator;

a counter for measuring the ON time of the DF signal as a counter value, the counter value being cleared to 0 by a reset signal;

a timer for generating a sampling signal and the reset signal in each sampling time;

an averaging circuit for performing an averaging process on the counter value in response to the sampling signal; and

a storage circuit for storing the average value calculated by the averaging circuit.

3. A control device for a vehicle alternator according to claim 1 or 2, wherein the sampling time is set to an arbitrary value in advance.

4. A control device for a vehicle alternator according to claim 2, wherein the DF signal is a gate logic signal of the power transistor.

5. A control device for a vehicle alternator according to claim 4, wherein the regulator IC includes an AND gates, and the AND gate inputs a clock signal to the counter during an ON period of the gate logic signal.

6. A control device for a vehicle alternator according to claim 2, wherein the FD signal is a field logic signal on a side of a collector terminal of the power transistor.

7. A control device for a vehicle alternator according to claim 6, wherein the regulator IS includes an OR gate, and the OR gate inputs a clock signal to the counter during an OFF period of the field logic signal.